DOCUMENT RESUME

ED 219 166 PS 012 992

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TITLE Early Childhood Education, 1982.
PUB DATE 82
NOTE 34p.

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Cultural Influences; *Early Childhood Education; Educational Administration; *Global Approach; Literature Reviews; *Outcomes of Education; Preschool Children; *Preschool Curriculum; Preschool Teachers; Program Length; Student Characteristics; Teacher Characteristics; Teacher Response
IDENTIFIERS Context Effect

ABSTRACT

Literature related to eight major categories of variables affecting the experiences provided to children in preschools is reviewed in this paper. Categories initially discussed include contextual factors, characteristics of clients, characteristics of teachers and other assisting adults, and the preschool curriculum. A short discussion of the context of preschool education focuses on historical, philosophical, and cultural factors. Subsequently, attention is briefly given to age, socioeconomic status, and other variables, such as cultural differences between clients. Following discussion of interaction patterns of teachers and children, the review focuses on the preschool curriculum, providing examination of curriculum models, the immediate effects of preschool education, the long-term effects of different curricula, and lasting effects of preschool education in general. The remaining sections of the review provide background information and raise issues related to parent participation, program administration and sponsorship, program length, and environmental variables. Throughout the review a global perspective is maintained and research findings from several countries are reported. (RH)

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Early Childhood Education

1982

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PS012992

Prepared for the International Encyclopedia of Education: Research and Studies: Husen and Postlethwaite (Eds.) Pergamon Press, London, England. (in press.)

025/90401 Early Childhood Education

World interest in early childhood education has grown steadily since the early nineteen sixties, as reflected in the documents produced in observance of the International Year of the Child in 1979, as well as in numerous reports issued by OECD, the Council of Europe, and UNESCO. This interest stems in part from the increasing number of mothers of young children employed outside the home, more often than ever in industrial or quasi-industrial settings in which the child's presence is neither feasible nor desirable. Although at one time grandparents or older siblings might have taken care of the young, the former are now frequently employed themselves, and the latter are staying in school longer. Another stimulus for interest and expansion in early childhood education in many parts of the world is the slow but steady improvement in basic child health which has been accompanied by greater attention to their social and intellectual development.

Converging upon these trends is the spreading conviction among professionals as well as the wider community that experience during the early years may have significant, if not irreversible, effects upon all subsequent development--particularly on later responsiveness to schooling. Together these trends have resulted in a high rate of expansion, research, innovation and development which can only be sketched in brief here.

The term "early childhood education" refers to a variety of types of provisions for young children in different countries, regions and provinces. In this discussion the term is used to refer to group settings for children between approximately three and six years old which are deliberately designed to support and stimulate their intellectual development.

Group settings for children under three years old, usually referred to as "child care" institutions, are dedicated to the total care of children of a wide age range. In child care institutions the promotion of intellectual growth is just one among many functions. Group settings for children above the age of six (or seven in a few countries) are typically called elementary and primary schools. The main function of elementary and primary schools is academic instruction.

Although the settings in which early childhood education is provided are known by a variety of names (e.g., nursery school, kindergarten, playgroup, day nursery, école maternelle, Jardin d'enfants, etc.) they may provide the same services. For the sake of simplicity they are called preschools in this review.

It has been suggested that at least eight major categories or groups of variables both determine and constrain the activities and events constituting the day to day experiences provided to children in preschools (Katz, 1970). These categories are: contextual factors, characteristics of clients, characteristics of teachers, curriculum, parent influence, administrative factors, length of program and physical facilities and climate. Each is considered in turn below. Although it is difficult to disentangle the separate contributions of each category to the total quality and impact of preschool education, the categories are used here to organize the review.

1. Contextual Factors

At least three sub-categories falling under the general heading of contextual factors seem to influence the daily events in the preschool program, typically indirectly. These include historical, philosophical and cultural factors.

(i) Data concerning the historical factors, including the social, political, economic, religious and other antecedent events that give rise to the development of preschool education around the world, have not yet been compiled, nor does such a compilation appear to be a feasible project. While events fostering the expansion of preschool education have varied at different times in different countries, some general factors seem to emerge across countries.

One such common factor has been change in the employment status of women, sometimes due to the exigencies of war, and sometimes related to rapid industrialization. Another common factor has been recurring waves of moral and ethical zeal directed to the rescue of young children from hazards variously associated with urban life, poverty, disease and other types of neglect (Lazerson, 1972). It is interesting to note that in several cases, the history of preschool education is not a record of steady development and expansion, but is marked by fluctuations in support and size associated with the internal changes suffered by the society in which it exists. For example, Kellmer-Pringle and Naidoo point out that "a greater proportion of three and four-year-olds in England received schooling in 1900 than in 1972." (p. 7, 1975) Similarly, in the U.S.A. the second World War was accompanied by dramatic increases in the employment of women that stimulated the provision of child care institutions, most of which were dismantled at the close of the crisis.

(ii) Philosophical Factors include such variables as the "school of thought" governing decisions about the goals and methods used in the preschool, linked to a variety of values, goals and objectives all of which may be embedded in an educational or social ideology. Revolutionaries, reformers

and Utopianists frequently set out to strengthen their achievements by means of intervention with the very young. In some countries preschools are designed primarily to serve the purposes of "citizenship education" as in the People's Republic of China (Gilliom, 1978). However, in many others the recent expansion and interest in preschools has been guided by efforts to minimize the ill-effects of poverty and to increase the ultimate chances for equality of opportunity. Educational philosophers have a more direct influence on the goals, curriculum organization and content of education offered, than on the methods used. Early philosophers and innovators who continue to have some impact on contemporary preschool education are Pestalozzi, Froebel, Montessori, Freinet (in Europe) and Dewey (in the U.S.A), although their ideas have been modernized in many ways. Preschool education continues to be marked by sharp ideological disputes concerning such issues as the appropriateness of formal instruction-sometimes called "structure"--for preschoolers, the value of play and the relative emphases on academic versus emotional and social goals (Kohlberg and Mayer, 1972). To some extent these disputes line up alongside various "schools of thought" in psychology such as behaviorism, psychoanalysis, Piaget's genetic epistemology and so forth. (Studies of preschool programs organized according to various schools of thought are discussed below under the heading of curriculum.)

(iii) Cultural Factors. The number of potentially significant cultural factors that affect preschool education is too large to be dealt with in detail here. These factors constitute a pervasive aspect of the context in which all education occurs, but seem especially salient in considerations of preschool practices, for several reasons. One reason is that the younger the child served, the closer the institution's link to the home has to be,

and the stronger and more intense the feelings of all involved are likely to be. Another reason is that the younger the child served, the greater the malleability of the child, and the less certain anyone can be about the ultimate long range effects of the events and activities provided, even though immediate effects are easily visible. Two features of culture of particular interest are complexity and modernity (Triandis, 1980). Complexity refers to the extent to which a given society is marked by differentiation of roles, technical specialization, density of population, use of money in exchange, and so forth. Indices of modernity include openness to new experiences, dispositions to form opinions about matters not of direct or immediate concern, trust in unknown people, independence from parental authority, concerns about the passage of time, etc. (Triandis, 1980). Both of these sub-categories of contextual variables affect attitudes and practices in preschool education and the importance it is accorded in a given society. For example, familism, and a narrow time perspective, both aspects of traditional (vs. modern) cultures, affect the importance given to preschool education within a specific culture. Familism implies a tight network of kin with a distinct, age-related authority structure in which young children are at the bottom suggesting a low emphasis on development-over-time as a basis for preschool planning. Thus both the complexity and the modernity of a culture would be related to goals and practices in preschools. Inasmuch as many societies vary on several levels, being modern on some levels and traditional on others, it is not always possible to distinguish specific practices along these dimensions. No studies have been found which report the potential effects of participation in two divergent cultures (e.g., home/school) upon children's development at the preschool level. Much of the available literature, by virtue of

its constant pleading for cooperation and coordination between home and school, implies that the divergence of cultures in which young children may have to function simultaneously is a source of stress (CERI, 1981). The proportion of children for whom divergent cultural patterns are stress-producing has apparently not been empirically established. Finally, in some countries a major objective of the preschool is to ease the assimilation of immigrant children and their families into the host country or mainstream (e.g., West Germany, Israel).

2. Characteristics of Clients

This category of factors affecting preschool education includes the variable characteristics of both the children and their parents (in their child-rearing roles) served by a given preschool program.

One important variable is the age of the children. Not surprisingly, age appears to be one of the least precise criteria by which to describe a population of preschoolers within countries, as well as among them. While Scandanavian countries (Denmark, Finland, Ireland, Norway, Sweden) consider the "under sevens" to be preschoolers, in the U.S., Cyprus, Hong Kong, Jordan and Czechoslovakia, among others, "under fives" attend preschool programs. Most European countries (other than those mentioned above), - Austria, Belgium, France, Yugoslavia, Federal Republic of Germany - as well as the U.S., India and China set the upper limit for preschool at six years. Just as the upper age limit varies, there is also no consensus about entrance age. In many countries (Ghana, Japan, USSR, Chile, U.S.) children under two years old can attend some preschool institutions. In others, e.g., Argentina, Belgium and Thailand, the entrance age is three years and above. (Mialaret, 1976) For younger children, the institution is more likely to be a crêche or day care center,

not primarily educational in function. The common thread in all institutions that conform to our definition of preschool is that they are not compulsory (Woodhead, 1979), and that they are available to children for about three years before the age at which schooling becomes compulsory.

The age group composition of a preschool class remains a subject of some controversy among specialists and practitioners. In those locations where a choice of age group exists, the evidence - though not without ambiguity - suggests that a number of logistical as well as pedagogical purposes can be served by mixing the ages within classes so that the oldest and youngest age groups represent about 15% each of the total enrollment.

In such classes the youngest have more mature linguistic as well as social models to emulate, the eldest have opportunities for "teaching and leadership/responsibility," and the middle age group might be in the best position to consolidate gains on many developmental fronts. Special benefits may accrue to the teachers of such age-mixed groups in that the wider range of maturity thereby available decreases the proportion of pupils who are highly dependent, increases the number of 'helpers' available to the youngest members, and minimizes the temptation teachers often have to under or overestimate children's abilities (Freedman, 1982).

Another important variable under this heading is the socioeconomic status of the children and their families. Evidence suggests that much socioeconomic segregation occurs in preschool enrollments, in part due to the initial purposes to be served by the preschools provided (Mialaret, 1975). In many countries, publicly supported preschools are attended by the children of lower income families and private or even charitably supported preschools serve children from higher income families. Associated

with socioeconomic differences are differences in attitudes towards child rearing in general, and education and preschool education in particular (Clark and Cheyne, 1979; Shinman, 1975; Delhaye and Pourtois, 1979; Tai and Kwang, 1979).

Robert LeVine (1980) offers an interesting perspective on parental goals across cultures using the concept of parental "investment" strategies, and what parents want from their children immediately as well as ultimately. For example, while the African parents he studied seemed to pursue a strategy aimed at linking the child's welfare to that of the parent and the family, American parents pursue investment strategies which involve the allocation of large amounts of resources (e.g., time and attention) to a small number of children aimed at producing an independent, self-reliant person capable (among other things) of maintaining or enhancing the parents' social and economic position. In many other ways, background characteristics of the children and their families influence what "lessons" are emphasized, what indices of good adjustment to school are used (e.g., obedience), the extent of sex differences in what behaviors and activities are encouraged, and so forth.

It may be that children of the higher socioeconomic groups in preschools in different countries are more like each other than they are like the children of lower socioeconomic groups within their own countries. It seems reasonable to assume that greater wealth increases the young child's experiences with making choices (from among such things as foods, toys, activities, etc.). In an environment in which choices are relatively few, emphasis on self-determination, self-efficacy (Bandura, 1982), and/or on autonomy and reflectivity may not be pertinent. In a U.S. study of the differences between preschool "experts" and Head Start, Lewis (1978)

found that parents gave greater importance to what she called 'interpersonal-affective' goals (e.g., learning to share, cooperativeness, respect for others, etc.) than did the twenty-six preschool "experts" she surveyed. The latter group assigned greater importance to 'intrapersonal-affective' goals (e.g., self-confidence, independence, self-reliance, love of learning, etc.). It is reasonable to hypothesize that teachers in preschools fall somewhere between the parents and the "experts" in the degree to which they emphasize these two sets of goals by virtue of their contact and/or sensitivity to both groups. Differences between the "experts," teachers and parents in what goals they emphasize can affect the preschool program in many ways. The "experts" are likely to have greatest impact on the development and selection of the curriculum to be implemented in the classroom. Teachers' goals have greatest impact on the actual experiences of the children as well as in the ways they interact with the parents. Parents' goals are likely to be related to the extent to which they participate in the programs, with greater participation bringing them closer to the views of the teachers. In many programs for low-income and/or minority group children efforts have been made to encourage parents to set their own goals and curricula (cf. Aboriginal Family Education Centers described in Teasdale and Whitelaw, 1981, and the Enabler Model described in Katz, 1973).

Bernstein's formulation of the concept of "invisible pedagogies" (Bernstein, 1975) addresses some of these issues in that he suggests that the informal child-centered and play-oriented curricula may be invisible to the parents of low income children, leaving these parents puzzled and feeling unable to assist their children or to support their children's intellectual striving, as well as uncertain of the educational value of the program being offered to the child. On the other hand, he suggests that the

parents of high-income children seem to find the informal and child-centered curriculum visible, understandable and usually desirable. Inasmuch as many preschool programs have been developed by the "experts" for the low income child and his family, potential sources of miscommunication due to goal and visibility differences are important to consider (see also Hess, 1980). Preschool programs designed to assist rural, village or culturally different groups require special sensitivity to their goals, values and beliefs concerning the nature of childhood and family relations. Helping the families to change in the direction thought by experts to be most beneficial, but in conflict with local values, can cause acute dissension and dissatisfaction with the program and its implementors. In addressing the ethical conflicts inherent in such cultural and goal differences, Triandis (1979) points out that when one of the values within a cultural group in is conflict with another of its own values (for whatever reason), "a change in culture which maximizes a cultural group's most important values, even if it is inconsistent with other values, or one that attempts to modify a behavioral pattern that is no longer functional, or one that brings accurate information into a situation where magical beliefs, or inaccurate information, are widely used, can be ethically defensible" (p. 2).

The list of other characteristics of the clients - both children and their parents - that require consideration in program planning and evaluation is too long to be dealt with in greater detail here. Nevertheless they obviously constitute variables in a major category of determinants of the ultimate qualities as well as outcomes of preschool education.

3. Characteristics of Teachers and Other Assisting Adults

While virtually all specialists in preschool education agree that the teacher's role is a central determinant of the ultimate effectiveness of the program offered, little systematic research is available from which to extract the teacher variables associated with given effects. In a review of some of the available research Phyfe-Perkins (1981) reports that teachers observed to have a high ratio of encouragement to discouragement behavior had children who persisted in activities longer, and who demonstrated more independent behavior than the children of teachers with low ratios. It appears that these ratios are not independent of such other teacher competencies as the ability to arrange play space, to offer appropriate materials and activities and to manage the children's transitions from one activity to another smoothly.

There is some evidence to indicate that, in a given classroom of young children, teachers tend to engage in greater amounts of interaction with those children who have greatest verbal fluency and ability (Crahay, 1980). This phenomenon is one of a class of interaction patterns that can be characterized as a recursive cycle. The concept of recursive cycle refers to the fact that having a given characteristic or behavior - in the example used here, verbal ability - stimulates responses from others which leads to strengthening it or acquiring more of it. Thus the more verbally able a child is, the more verbal input he or she gets from adults, and the more verbally able the child becomes. If the child's verbal abilities are weak, teachers and other adults tend to see the child as wanting to be left alone. In the light of how busy teachers are, they tend to avoid interactions in which the child can be expected to hesitate or stammer; this causes such a child to fail to progress as fast as others. The recursive

cycle deals with a behavior and/or characteristic that tends to "feed on itself." One of the issues suggested by the concept of the recursive cycle is that the child cannot break the cycle alone. The intervention of an adult is required to break and thus change the cycle a child is caught in.

One of the issues of central concern to program developers and planners is the ratio of adults to children in preschool classes, especially since salaries and wages constitute the largest costs for most educational institutions. A comprehensive study of the quality of child centers in the U.S.A. (Smith, 1979), included staff-child ratio as an index of quality and showed that it was related to measures of cognitive outcome taken of the children. Based on their findings, the investigators recommended that the best impact on children is obtained when the group size is less than 14 children, and the staff-child ratio is equal to or exceeds 1:7 (Smith, 1979, p. 24).

In an extensive study of provisions for children under five years old in Oxfordshire, England, Bruner (1980) reports that the content of the relationships between teachers and children in various kinds of preschool settings was heavily centered on "petty management - housekeeping, talk about meal time - instructions about picking up, washing, and the like" (Bruner, 1980, p. 61). In addition, Bruner reports that only 20% of all interactions observed consisted of sustained conversations and two thirds of those are between children. Given the importance of sustained and sequentially contingent interaction to both intellectual and social development (Bronfenbrenner, 1978) these proportions suggest that the preschools from which they come may not be supplying adequate patterns of adult-child interaction.

One unique approach to the adult-child ratio problem adopted in preschool classes (Vorschulklassen) in Hamburg, West Germany provides for half of the children in the class to attend the first two hours of the 3-hour morning session, and the other half to attend the last two hours of the morning. In this way the staff has only half the total number of children enrolled for two of the three hours of the daily session. (Richtlinien für die Erziehung in Vorschulklassen, 1975). This arrangement maximizes the advantages of small and large group activities and experiences, though it may be inconvenient for parents.

4. Curriculum

Included under this heading are such variables as the extent to which activities are provided for the children as a whole group, in small groups, or on an individual basis; the temporal sequence of activities, the extent to which the children or adults initiate activities, the quantity and variety of stimulation offered, the variety and types of materials, the substantive content of activities and lessons, the formality-informality of instruction, the extent of didactics, spontaneous play and structured projects and so forth.

The organization of preschool curriculum depends to some extent on the ideological and theoretical perspectives on young children held in particular countries and their cultural subgroups. In addition, the availability of instructional or learning materials offered in classrooms may affect their potential stimulus value as well. In countries or regions within which households have relatively few materials, a small stock of them in the preschool class may be highly stimulating; conversely, children surrounded by many materials at home and then also at preschool may have

difficulty achieving sufficient focus or involvement for intellectual development to be fostered (see Phyfe-Perkins, 1981). Thus there may be an optimum ratio of amount and types of materials available at home to those available in the preschool in order to foster intellectual and other development.

Preschools in different countries utilize different types of materials and equipment, so that some are of the ready-made variety, others are found naturally in the surroundings (e.g., leaves, stones, sand and water, etc.), and some are specifically made by teachers or parents, and even by the children themselves.

A great variety of teaching methods are used, probably stemming largely from traditions within cultural groups with regard to children in general. In some countries guidelines are offered on teaching methods to help individuals choose from among alternatives (e.g., Italy, Iran). While the influence of Montessori (India, Colombia, U.S.A.), Froebel (Australia, Greece, Peru, U.K) and Decroly (Belgium, El Salvador, Mauritania, Singapore) appear to be quite marked in the methods chosen, many other methods are also encouraged. Curriculum and teaching methods vary between countries as well as within them. The discussion below is drawn primarily from the U.S.A. since the bulk of the recent research on curriculum methods has been conducted and reported there.

(i) Curriculum Models

Several classifications of programs and curricula have appeared in the last two decades (Miller, 1979), none of which seems to capture completely the dimensions on which some 200 or them appear to vary (see Maccoby and Zellner, 1970). Some classifications focus on the intentions and goals of the originators of curriculum models, some on the observed activities and

interactions, some on so-called philosophy or ideology, and still others on content or context emphasis. Inasmuch as the available research points to no clear curriculum determinants of effectiveness of the models, no single classification scheme seem more useful than any other. For the purposes of this review, three groups of curricula classified in terms of their main goals as follows: (a) academic models, (b) intellectual models, and (c) parental effectiveness models. Obviously many curriculum models do not clearly fall into either of these three rubrics, but represent mixtures of each as well as sometimes placing strong emphasis on psychosocial developmental goals. For example, it would be difficult to classify the typical playgroup curriculum of Great Britain or New Zealand (Somerset, 1976) into either of the three categories since their emphasis on intellectual development is at least as strong as the emphasis on social development and/or parent education. The typical curriculum of nursery schools in the Soviet Union and the Eastern European countries appears also to emphasize physical, perceptual, social or character development. Much emphasis is also given to learning how to participate in a group or collective society as well as to preparation for the next level of schooling (Jacoby, 1975). However, research on the effects of these curricula has not been found.

Curriculum models classified as having "academic" goals are those oriented toward the preparation of preschool children for later school-type tasks, and the development of those skills expected to be demended in later school experiences. In the U.S.A., the U.K. and Australia such academic curriculum models received much of their impetus from the assumption that children from either low income families and/or from given sub-cultures come to school with linguistic and other cognitive deficiencies that can be made up by specially designed lessons related to anticipated

school requirements (Delacey, 1979; Chazan, 1973). Many such academic curricula have been studied, especially in the U.S. and the results are discussed below. Among the best known U.S. examples are Bereiter-Engelmann, DARCEE, and Behavior Analysis (see Maccoby & Zellner, 1970).

Preschool curriculum models having "intellectual" goals are those oriented toward what are sometimes called "discovery" methods, Piagetian-type tasks, direct experience with a variety of materials in play situations and the provision of so-called enriched environments characterized by frequent verbal interaction between the adults and children as well as among the children themselves. The Montessori curriculum comes under this heading although it is somewhat more restrictive in terms of the materials offered and in the extent to which the teachers intervene in the children's activities and engage them in interaction. Some well known examples of this curriculum model are Montessori, High/Scope (developed by David Weikart), and Bank Street sponsored by the Bank Street College in New York (see Maccoby & Zellner, 1970).

Curriculum models focusing directly on the enhancement of parental effectiveness are not really models of preschool curricula. Rather they are focused on helping the parent - usually mother - to interact and to stimulate the child in ways assumed to be more effective and appropriate at home. Examples of these include the Florida Model (Gordon, in Maccoby & Zellner, 1970), the Mother-Child Home Program (Levenstein, 1972), and the HIPPY Program (Lombard, 1980). Curriculum models in the other two categories have often included parent training components as well. Many preschool classes can be thought of as mixtures of two types: of the preschool curriculum plus home intervention. The term "traditional" is also

often applied to those preschool classes in which strong emphasis is placed on social development, emotional expression, creativity and basic cognitive and physical skill development.

The best known preschool "intervention" project in recent years is Project Head Start, launched in the U.S.A. in 1965. Since the beginning it has served more than 8 million children of low income families. Project Head Start is national in scope and comprehensive in services. While its main objectives have been to give the children a "head start" on later schooling, that task was approached on many fronts at once, including parent involvement, health, nutrition, social and psychological services as well as the educational enrichment provided by classroom experiences based on a fairly traditional view of the needs of preschool children and of teaching methods.

Datta (1979) points out that the results of the evaluations of Head Start (as one type of preschool program for poor children) have shifted at least three times since the program's inception in 1965. During the first three years the results of evaluations indicated that the educational component of Head Start achieved the positive educational benefits it was originally designed to produce. During the subsequent five-year period, disillusionment set in as more data cast doubts upon the original positive findings, particularly as they were depicted in the famous "Westinghouse Report" (Cicarelli, 1969). By the late 1970's, however the general climate of opinion had changed into an optimistic one as a result of increasingly favorable results reported from longitudinal studies of preschool graduates.

(ii) Immediate Effects of Preschool Education

In a review of studies of the comparative effectiveness of different curriculum models Miller (1979) analyzed and summarized the findings of three

separate studies in which at least four different curriculum models were implemented and evaluated. According to Miller, no one of the various curriculum models tested was superior to any of the others when all of the immediate child outcomes were considered. It appears that all well-developed models had beneficial effects on the children when the children were compared to those who had had no preschool education. However, in terms of specific measures, those models with strong academic emphases yielded greater gains on academic tests than did other models. Two factors may account for the immediate positive outcomes associated with the academic curriculum models. One is that the more closely the curriculum materials and lessons approximate the items on the tests used for evaluation, the more likely the children are to score well on them. A second one suggested by Miller is that it may be easier to train teachers to implement the academic models than the more child-centered or "discovery" oriented models; the academic goals and teaching techniques are easier to specify and to learn to use. Indeed, in some respects the more highly didactic ones are said to be "teacher proof."

(iii) Long Term Effects of Different Curricula

The pattern of outcomes of longitudinal studies of preschool education is complex as well as somewhat controversial. Miller (1979) examined available data on the long term effects of different curriculum models and reports that the early favorable results produced by the academic curriculum models do not endure much beyond the second year of primary school, although children with preschool education generally are better off than those children who had none. One study of particular interest was conducted by Miller and colleagues in which four distinctly different models

were compared and long term follow-up data were gathered on the children's school performance two and three years following their preschool and kindergarten years. Four curriculum models were studied: two of the academic type, one Montessori and another generally called "traditional," implying an emphasis on social development as well as environmental enrichment, provision of opportunities for and encouragement to explore the environment, support for creative expression and for spontaneous verbal interaction with adults and other children.

The pattern of results is difficult to summarize. In general the stable effects shown in measures taken four years after the program, as well as seven and eight years later (Jones and Miller, 1979), indicated that the Montessori curriculum produced "superiority in a number of areas, notably reading." (Miller, p. 214, 1979.) The follow-up data produced by the comparative studies suggest that while the skill-learning emphasized in academic curriculum models during the preschool period yield good effects when tested immediately after the program, these effects fade because motivational and dispositional factors play a greater role than skill factors in children's school performance as they get older. Thus, children in the sixth or seventh year of schooling may have the skills that are required for optimum functioning in school, but may lack the motivational and dispositional characteristics required for sustained effort in the school situation. This dispositional deficit may lead to a decline in use of skills which ultimately shows up on the tests during the later grades, but is not noticeable immediately following the preschool experience. Thus, the notion of "fade out" or "cumulative deficit" used to describe the pattern often associated with early gains resulting from preschool experience and subsequent decline in achievement, may need to be understood in terms of

the relative shift in the importance of skills versus motivational dispositions to use them at the different age levels. The data reported by Jones and Miller (1979) and the summary of comparative study data presented by Miller (1979) suggest the hypothesis that the academic models succeed in obtaining early skill acquisition at the expense of dispositions (such as interest, persistence, curiosity, verbal-social participation, etc.) and that these dispositions are more susceptible to negative influences associated with poverty, poor teaching, and to other threats in the educational environment, thus contributing greater proportions of the variance in achievement as the children progress through the elementary grades. In the absence of confirmatory data, preschool planners may maximize benefits by offering curricula that optimize the acquisition of both relevant skills and motivational dispositions at the same time, i.e. tempering the academic models with sufficient opportunities for self-direction and social interaction and some degree of informality.

(iv) Lasting Effects of Preschool Education in General

In 1975 investigators in the U.S. who had offered special preschool programs to the children of low income families in the nineteen sixties began coordinated studies of the graduates of their various programs in order to ascertain whether any long term effects could be detected. Under the title of the Consortium on Developmental Continuity the investigators applied a variety of measures to the graduates of their preschool programs who ranged in age from nine to nineteen (Department of Health, Education, and Welfare, 1979) the following results are listed:

> (a) preschool education significantly reduced the number of low-income children assigned to special education classes (p. 6).

(b) preschool education had an "average" effect of reducing the incidence of grade failure among low-income children (p. 7).

(c) children who had preschool education more often met the grade level expectations of their schools (p. 8).

(d) preschool education positively affected later school performance independently of the effects of the early background measures (pp. 8-9).

(e) preschool graduates gave achievement-related reasons for feeling proud of themselves more often than control group children (pp. 19-20).

(f) when ten program characteristics were tested for their contribution to the effects (e.g., length of program, degree of parental influence, program location, professional versus paraprofessional staff, and so forth) none appeared more influential than others.

A more recent report of follow-up data on graduates of the Perry Preschool Project sponsored by David Weikart of the High/Scope Foundation (Schweinhart and Weikart, 1980) confirms the same pattern of positive outcomes. In addition, Schweinhart and Weikart present an analysis of the economic implications of the long term effects showing that the investment in preschool education can yield substantial savings in terms of the costs of special education, subsequent employment and other categories of social and economic difficulties associated with the effects of poverty on young children and their later life chances.

In summary, all of the available follow-up data on the lasting effects of preschool education indicate general positive effects. No one curriculum model seems to show overall greater effectiveness than any other, although within some comparative studies different models produce differentiated

effects in the short and the long term. It should be noted that all of the long term data available thus far were generated by specially and carefully operated preschool programs, often in laboratory-type environments, with funds for staff training, testing, and other program amenities. Their outcomes give a picture of the potential benefits of preschool education when careful planning, operation and monitoring of the programs are possible.

5. Parental Influence

Preschool programs vary widely in the extent to which parents have power over the staffing, curriculum and other aspects of the program, whether or not they pay for the service, as well as how much they pay. In most countries a full range of patterns of parental power and influence can be found. In some countries (e.g., U.K., New Zealand, Canada and U.S.A.) programs in which parents make all major decisions as well as staff the daily programs are found under the title playgroups or cooperative nursery schools. (Somerset, 1976; Bruner, 1980). Generally these kinds of preschools have served middle-income families. One variant of this kind of program is that in which the preschool program is located in a factory or on a college campus (for students' children) having one paid and qualified worker in each class of fifteen or twenty children. The remainder of the staffing is made up of parents who each voluntarily take a turn to "work" in the classroom a few hours per week thus improving the adult-child ratio (see Faragher et. al., 1975). Arrangements like these may have multiple benefits in that they increase the adult-child ratio, expose parents to professional attitudes and techniques of working with children, and alleviate some of the potential tedium experienced by many preschool teachers when working with very young children every day; the presence of the

parents can increase teachers' feelings that their work is significant and appreciated by relevant other adults (Katz, 1977).

6. Administrative and Sponsorship Factors

Variations in program administration include the size of the preschool, the distribution of authority and decision-making, and staff coordination/ cooperation. Sponsorship refers to the source of funding, authorizing body and official regulating agency. Subcategories within each of these two factors tend to be inter-related. Small preschool units tend to be supported through private funds, charities, service organizations such as the Junior League or from fees paid by parents. Larger institutions may be parts of larger municipal, regional or national networks, supported by public funds and subjected to centralized authority and decision-making processes.

In general, preschool institutions fall into four broad categories of sponsorship: (a) state supported, (b) private, (c) local or provincial authorities and (d) semi-private institutions under partial state supervision (Mialaret, 1975). Preschool institutions representing all four types are typically found within each country although their distribution varies across countries. The French system, for example, offers unified, centrally planned preschool education with very little private provision and few programs offered by voluntary agencies. Some all day nurseries are sponsored by the Ministry of Education and operated by local authorities or corporations. But the largest segment of preschool institutions is under the administration and sponsorship of the Ministry of Education and modeled on primary schools (OECD, 1979).

Preschool education in diverse countries falls under the purview of a variety of agencies, a phenomenon that gives rise to interagency tension,

and "territorial" disputes concerning which governmental agency has the most appropriate expertise and the best interests of children and families at heart. The list of agencies includes ministries of education, public health, youth, welfare, social welfare, mental health, population, labor, etc. It also includes semi-public agencies (e.g., Mining Corporation of Bolivia) or specially created bodies attached to the Department of the President of the Republic. In Norway, for example, one centralized body - the Department of Family Affairs and Equal Status - has total responsibility for policies related to children. In Japan, the two types of institutions for preschoolers are both centrally administered with the kindergartens coming under School Education Law, and the Day Nurseries or Crêches under the Child Welfare Law (The Japanese National Committee of OMEP, 1976).

Private preschool institutions constitute a heterogeneous group and can be categorized as follows: (a) preschools organized by a private individual or small group unsupervised by an official body, (b) private schools operated by a private but well-known agency, e.g., a group of voluntary agencies providing preschool education for low income children in Hong Kong (Chu and Wong, 1978). In Greece, preschools/kindergartens are provided by industrial companies; in Trinidad and Tobago some preschools are supported by the Bernard Van Leer Foundation, and in Czechoslovakia some are attached to factories and cooperatives, (c) religious organizations such as the Roman Catholic Church, Islamic (Khalwa in Sudan), or Protestant institutions. Parochial preschools are found in most countries around the world.

In countries like Belgium, Canada and Switzerland, where education in general is a provincial responsibility and, in addition, where provincial

differences in language usage sometimes creates tension, preschool education is the responsibility of the provincial or canton government. Semi-private schools under official state government supervision operated by certified private individuals, groups or associations exist widely in almost all countries. In Cyprus, preschool education (called kindergartens) occurs in five types of sponsorship and are supervised by diverse ministries (Statistics and Research Department, Cyprus, 1980).

The variety of official supervising agencies and funding sources affect the qualificatons of the staff, the amount of autonomy available to the staff, the responsiveness of the curriculum and teaching methods to local preferences, values and purposes served by the institution. Ultimately these can be expected to be associated with differences in effectiveness and impact on developmental outcomes.

7. Length of Program

Variables within this category of factors include the length of the preschool day, the number of days per week. Some preschools provide service for two or three hours per day, some twice weekly. Other preschools provide all-day programs, every weekday morning, and others the whole variety of possible lengths of the day and frequencies of the week, as well as length of the year. Most countries offer a variety of time schedules at the preschool level. In the People's Republic of China some community operated preschools (translated as 'kindergartens') offer twenty-four hour service for seven days a week, with both full day care and boarding facilities. Denmark has two types of preschool institutions: all day and part day. Japanese preschools are typially four hours per day while Norwegian preschools are available as both four hours per day ("short

time kindergartens") and four to six hours per day (half day kindegartens). Thus there is great variation in total time available to children for preschool education. However, little is known about the relative benefits to the children of the number of hours in total, the number of hours per day or the frequency per week of attendance, or the problems the time variations create or solve for the teaching staff and for the parents.

One of the unresolved issues in the field is the potential benefit or harm of multiple versus single caregivers or teachers which in turn is related to the total number of hours per day and per week that the preschool service is available. Furthermore it is not clear whether children's relationships with multiple adults whose behavior patterns are very similar to each other (e.g., in expectations, demands, responses to children, etc.) create different effects from a relationship with one adult whose own individual behavior varies greatly.

8. Physical Facilities and Climate

The variables within these factors include the amount and type of space, outdoor and indoor facilities, accessibility to open spaces, neighborhood location, number of rooms per site as well as a range of climate variables.

The physical environment of a preschool is likely to have a large impact on the program in terms of the ease or difficulty with which activities can be managed, the variety of activities offered, frequency of indoor versus outdoor activity and the ease with which the safety of the children can be maintained.

Inasmuch as the uses of open and closed spaces may be culture-bound, it is difficult to draw generalizations that might apply from one country or region to another. For example, one study of Head Start classes in the U.S.A. indicated that the amount of controlling behavior of

teachers varied with the number of square feet per child (Phyfe-Perkins, 1980). However, it is not known whether such space-related behavior patterns would occur in other contexts.

Summary

Preschool education has been the object of vigorous research and development efforts in the last two decades, stimulated in part by contemporary knowledge of the effects of early experiences on intellectual development, and in part by the changing roles of women all over the world. In general, the currently available data are encouraging in that the indicate that well planned and implemented preschool programs can have long lasting positive effects on children.

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